

CLAIMS

1. An ink jet printhead comprising:
a plurality of nozzles;
a bubble forming chamber corresponding to each of the nozzles respectively, the bubble forming chambers adapted to contain a bubble forming liquid; and,
at least one heater element disposed in each of the bubble forming chambers respectively, the heater elements configured for thermal contact with the bubble forming liquid; such that,
heating the heater element to a temperature above the boiling point of the bubble forming liquid forms a gas bubble that causes the ejection of a drop of an ejectable liquid through the nozzle corresponding to that heater element; wherein,
the bubble forming chamber has a circular cross section.
2. An ink jet printhead according to claim 1 wherein the bubble forming chamber is cylindrical.
3. An ink jet printhead according to claim 1 wherein the bubble forming chamber is barrel-shaped.
4. An ink jet printhead according to claim 1 wherein the bubble forming chamber is a truncated cone shape.
5. An ink jet printhead according to claim 1 wherein the bubble forming chamber is spherical.

6. An ink jet printhead according to claim 1 wherein the ejectable liquid is the same as the bubble forming liquid.
7. An ink jet printhead according to claim 1 wherein the printhead is a pagewidth printhead.
8. An ink jet printhead according to claim 1 wherein the bubble forming chamber is at least partially formed by an amorphous ceramic material.
9. An ink jet printhead according to claim 8 wherein the amorphous ceramic material is silicon nitride.
10. An ink jet printhead according to claim 8 wherein the amorphous ceramic material is silicon dioxide.
11. An ink jet printhead according to claim 8 wherein the amorphous ceramic material is silicon oxynitride.
12. A printer system which incorporates a printhead, the printhead comprising:
 - a plurality of nozzles;
 - a bubble forming chamber corresponding to each of the nozzles respectively, the bubble forming chambers adapted to contain a bubble forming liquid; and,
 - at least one heater element disposed in each of the bubble forming chambers respectively, the heater elements configured for thermal contact with the bubble forming liquid; such that,

heating the heater element to a temperature above the boiling point of the bubble forming liquid forms a gas bubble that causes the ejection of a drop of an ejectable liquid through the nozzle corresponding to that heater element; wherein,

the bubble forming chamber has a circular cross section.

13. A printer system according to claim 12 wherein the bubble forming chamber is cylindrical.
14. A printer system according to claim 12 wherein the bubble forming chamber is barrel-shaped.
15. A printer system according to claim 12 wherein the bubble forming chamber is a truncated cone shape.
16. A printer system according to claim 12 wherein the bubble forming chamber is spherical.
17. A printer system according to claim 12 wherein the ejectable liquid is the same as the bubble forming liquid.
18. A printer system according to claim 12 wherein the printhead is a pagewidth printhead.
19. A printer system according to claim 12 wherein the bubble forming chamber is at least partially formed by an amorphous ceramic material.

20. A printer system as claimed in claim 19 wherein the amorphous ceramic material is silicon nitride.
21. A printer system as claimed in claim 19 wherein the amorphous ceramic material is silicon dioxide.
22. A printer system as claimed in claim 19 wherein the amorphous ceramic material is silicon oxynitride.
23. A method of ejecting drops of an ejectable liquid from a printhead, the printhead comprising a plurality of nozzles;
- a bubble forming chamber corresponding to each of the nozzles respectively, the bubble forming chambers adapted to contain a bubble forming liquid; and,
- at least one heater element disposed in each of the bubble forming chambers respectively, the heater elements configured for thermal contact with the bubble forming liquid; such that,
- heating the heater element to a temperature above the boiling point of the bubble forming liquid forms a gas bubble that causes the ejection of a drop of an ejectable liquid through the nozzle corresponding to that heater element; wherein,
- the bubble forming chamber has a circular cross section;
- the method comprising the steps of:
- placing the ejectable liquid into contact with the drop ejection actuator; and
- actuating the droplet ejection actuator such that a droplet of an ejectable liquid is ejected through the corresponding nozzle.

24. A method according to claim 23 wherein the bubble forming chamber is cylindrical.
25. A method according to claim 23 wherein the bubble forming chamber is barrel-shaped.
26. A method according to claim 23 wherein the bubble forming chamber is a truncated cone shape.
27. A method according to claim 23 wherein the bubble forming chamber is spherical.
28. A method according to claim 23 wherein the ejectable liquid is the same as the bubble forming liquid.
29. A method according to claim 23 wherein the printhead is a pagewidth printhead.
30. A method according to claim 23 wherein the bubble forming chamber is at least partially formed by an amorphous ceramic material.
31. A method as claimed in claim 30 wherein the amorphous ceramic material is silicon nitride.
32. A method as claimed in claim 30 wherein the amorphous ceramic material is silicon dioxide.
33. An ink jet printhead as claimed in claim 30 wherein the amorphous ceramic material is silicon oxynitride.